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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,090

10/14/2004

Satoshi Nagashima

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12/04/2006

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EXAMINER

PARSONS, THOMAS H

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 12/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/511,090

Applicant(s)

NAGASHIMA, SATOSHI

Examiner

Thomas H. Parsons

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1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

**The abstract of the instant specification is approximately 180 words, and contains the word "said" in line 11. Accordingly, the Examiner suggests amending the abstract as appropriate to within the range of 50 to 150 words, and delete "said".**

### *Claim Objections*

2. Claims 1-3 are objected to because of the following informalities:

Claim 1, lines 10, 12, and 15, suggest deleting the parenthesis;

line 10, suggest changing "provided that" to --wherein--;

line 13, suggest inserting a comma (,) after "substituted"; and,

line 14, suggest changing "provided that" to --wherein--.

Claim 2, lines 3 and 5, suggest deleting the parenthesis; and,

line 3, changing "provided that" to --wherein--.

Claim 3, lines 3 and 4, suggest deleting the parenthesis; and,

line 3, changing "provided that" to --wherein--.

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Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by JP2001-035492.

**Claim 1:** JP2001-025492 discloses a non-aqueous electrolyte secondary battery comprising a positive electrode which is configured by applying on a current collector a mixture [0027] which comprises:

a lithium-containing composite oxide having a hexagonal system structure, wherein Co is substituted for part of nickel atoms in the crystal lattice in a lithium-nickel composite oxide which is represented by a general equation,  $\text{LiNiO}_2$ , wherein the substitution percentage ranges from 5% to 30% of the number of nickel atoms in said lithium-nickel composite oxide and, in addition, at least one element which is selected from a group consisting of Al, Mn, Ti, and Mg is substituted wherein the substitution percentage is less than 20% of the number of nickel atoms in said lithium-nickel composite oxide,

a binder [0026], and

a conductive material [0026];

wherein the lithium-containing composite oxide is characterized in that a half width of the (110)-plane-based diffraction peak obtained from powder X-ray diffraction method, in which

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CuK $\alpha$  line is used as characteristic X-ray, is larger than 0.13° and smaller than 0.20° (abstract) and that the ratio of the (003)-plane-based diffraction peak intensity to the (104)-plane-based diffraction peak intensity is larger than 1.2 and smaller than 1.8.

Because JP2001-035492 discloses a lithium-containing composite oxide having the same composition and is synthesized in the same manner (i.e. coprecipitation followed by burning) as that instantly disclosed, it inherently would provided the claimed substitution percentages, and ratio of the (003)- to (104)-plane-based diffraction peak intensity. See also [0013]-[0055].

**Claim 2:** JP2001-035492 discloses a lithium-containing composite oxide is represented by the general equation,  $\text{Li}_w\text{Ni}_x\text{Co}_y\text{M}_z\text{O}_2$ , wherein M is at least one element which is selected from Al, Mn, Ti, or Mg,  $0 < w \leq 1.2$ ,  $0.95 \leq x+y+z \leq 1.05$ ,  $0.5 \leq x \leq 0.9$ ,  $0.05 \leq y \leq 0.3$ , and  $0 < x \leq 0.2$ . See abstract.

**Claim 3:** JP2001-025492 discloses a lithium-containing composite oxide is represented by the general equation,  $\text{Li}_w\text{Ni}_x\text{Co}_y\text{Al}_z\text{O}_2$ , wherein M is at least one element which is selected from Al, Mn, Ti, or Mg,  $0 < w \leq 1.2$ ,  $0.95 \leq x+y+z \leq 1.05$ ,  $0.5 \leq x \leq 0.9$ ,  $0.05 \leq y \leq 0.3$ , and  $0 < x \leq 0.2$ . See abstract.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Suhara et al. (6,929,883).

**Claim 1:** Suhara et al. disclose a non-aqueous electrolyte secondary battery comprising a positive electrode which is configured by applying on a current collector a mixture (col. 8: 65-col. 9: 15) which comprises:

a lithium-containing composite oxide having a hexagonal system structure, wherein Co is substituted for part of nickel atoms in the crystal lattice in a lithium-nickel composite oxide which is represented by a general equation,  $\text{LiNiO}_2$ , wherein the substitution percentage ranges from 5% to 30% of the number of nickel atoms in said lithium-nickel composite oxide and, in addition, at least one element which is selected from a group consisting of Al, Mn, Ti, and Mg is substituted wherein the substitution percentage is less than 20% of the number of nickel atoms in said lithium-nickel composite oxide,

a binder (col. 8: 65-col. 9: 15), and

a conductive material (col. 8: 65-col. 9: 15) ;

wherein said lithium-containing composite oxide is characterized in that a half width of the (110)-plane-based diffraction peak obtained from powder X-ray diffraction method, in which CuK $\alpha$  line is used as characteristic X-ray, is larger than 0.13° and smaller than 0.20° (col. 4: 3-38, col. 7: 44-54, col. 8: 50-64, col. 16: 17-63, col. 21: 35-col. 23: 67) and that the ratio of the (003)-plane-based diffraction peak intensity to the (104)-plane-based diffraction peak intensity is larger than 1.2 and smaller than 1.8.

Because JP2001-035492 discloses a lithium-containing composite oxide having the same composition and is synthesized in the same manner (i.e. coprecipitation followed by burning) as that instantly disclosed, it inherently would provided the claimed substitution percentages, and ratio of the (003)- to (104)-plane-based diffraction peak intensity. See also [0013]-[0055].

**Claim 2:** Suhara et al. disclose a lithium-containing composite oxide is represented by the general equation,  $\text{Li}_w\text{Ni}_x\text{Co}_y\text{M}_z\text{O}_2$ , wherein M is at least one element which is selected from Al, Mn, Ti, or Mg,  $0 < w \leq 1.2$ ,  $0.95 \leq x+y+z \leq 1.05$ ,  $0.5 \leq x \leq 0.9$ ,  $0.05 \leq y \leq 0.3$ , and  $0 < z \leq 0.2$ . See (col. 4: 3-38, col. 7: 44-54, col. 8: 50-64, col. 16: 17-63, col. 21: 35-col. 23: 67).

**Claim 3:** Suhara et al. disclose a lithium-containing composite oxide is represented by the general equation,  $\text{Li}_w\text{Ni}_x\text{Co}_y\text{Al}_z\text{O}_2$ , wherein M is at least one element which is selected from Al, Mn, Ti, or Mg,  $0 < w \leq 1.2$ ,  $0.95 \leq x+y+z \leq 1.05$ ,  $0.5 \leq x \leq 0.9$ ,  $0.05 \leq y \leq 0.3$ , and  $0 < z \leq 0.2$ . See abstract. See (col. 4: 3-38, col. 7: 44-54, col. 8: 50-64, col. 16: 17-63, col. 21: 35-col. 23: 67).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H. Parsons whose telephone number is (571) 272-1290. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
PATRICK JOSEPH PYM  
SUPERVISORY PATENT EXAMINER

Thomas H Parsons  
Examiner  
Art Unit 1745

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